COFFEE SHOP SALES PROJECT

CONVERT DATE (transaction_date) COLUMN TO PROPER DATE FORMAT

```
UPDATE coffee_shop_sales

SET transaction_date = STR_TO_DATE(transaction_date, '%d-%m-%Y');
```

ALTER DATE (transaction_date) COLUMN TO DATE DATA TYPE

```
ALTER TABLE coffee_shop_sales

MODIFY COLUMN transaction_date DATE;
```

CONVERT TIME (transaction_time) COLUMN TO PROPER DATE FORMAT

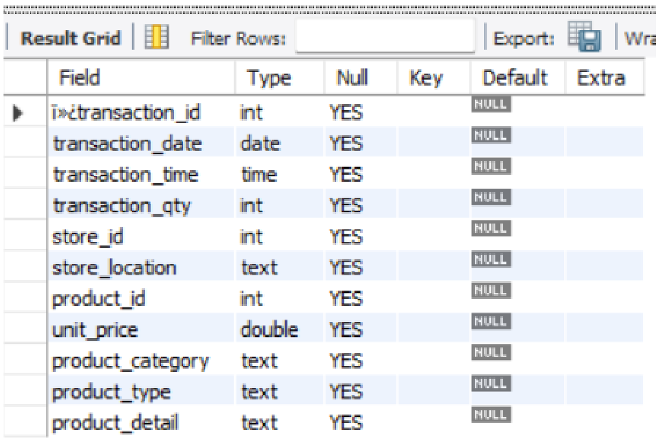
```
UPDATE coffee_shop_sales

SET transaction_time = STR_TO_DATE(transaction_time, '%H:%i:%s');
```

ALTER TIME (transaction_time) COLUMN TO DATE DATA TYPE

```
ALTER TABLE coffee_shop_sales

MODIFY COLUMN transaction_time TIME;
```

DATA TYPES OF DIFFERENT COLUMNS

```
DESCRIBE coffee_shop_sales;
```



Field	Type	Null	Key	Default	Extra
ï»¿transaction_id	int	YES		NULL	
transaction_date	date	YES		NULL	
transaction_time	time	YES		NULL	
transaction_qty	int	YES		NULL	
store_id	int	YES		NULL	
store_location	text	YES		NULL	
product_id	int	YES		NULL	
unit_price	double	YES		NULL	
product_category	text	YES		NULL	
product_type	text	YES		NULL	
product_detail	text	YES		NULL	

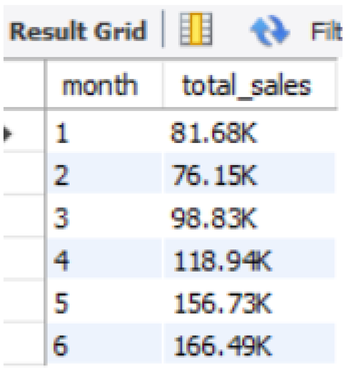
CHANGE COLUMN NAME `ï»¿transaction_id` to transaction_id

```
ALTER TABLE coffee_shop_sales

CHANGE COLUMN `ï»¿transaction_id` transaction_id INT;
```

TOTAL SALES

```
SELECT
```

```
    month(transaction_date) AS month,

    CONCAT(ROUND(SUM(transaction_qty * unit_price) / 1000, 2), 'K') AS total_sales

FROM

    coffee_shop_sales

GROUP BY

    month(transaction_date);
```

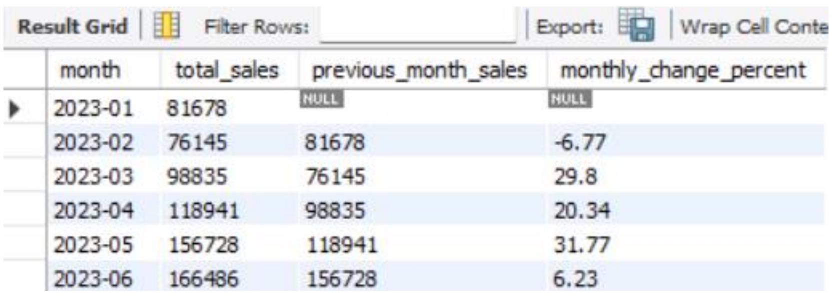


month	total_sales
1	81.68K
2	76.15K
3	98.83K
4	118.94K
5	156.73K
6	166.49K

TOTAL SALES KPI - MONTHLY DIFFERENCE AND MONTHLY GROWTH

```
WITH monthly_sales AS (

    SELECT

        DATE_FORMAT(transaction_date, '%Y-%m') AS month,

        round(sum(transaction_qty * unit_price),0) AS total_sales

    FROM

        coffee_shop_sales

    GROUP BY

        DATE_FORMAT(transaction_date, '%Y-%m')

    ORDER BY

        month

)

SELECT

    month,

    total_sales,

    LAG(total_sales) OVER (ORDER BY month) AS previous_month_sales,

    CASE

        WHEN LAG(total_sales) OVER (ORDER BY month) IS NULL THEN NULL

        ELSE round((total_sales - LAG(total_sales) OVER (ORDER BY month)) / LAG(total_sales) OVER (ORDER BY
month) * 100, 2)
```

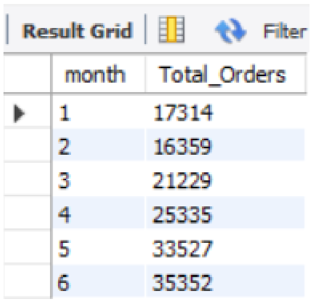
```
    END AS monthly_change_percent
FROM
    monthly_sales;
```



month	total_sales	previous_month_sales	monthly_change_percent
2023-01	81678	NULL	NULL
2023-02	76145	81678	-6.77
2023-03	98835	76145	29.8
2023-04	118941	98835	20.34
2023-05	156728	118941	31.77
2023-06	166486	156728	6.23

TOTAL ORDERS

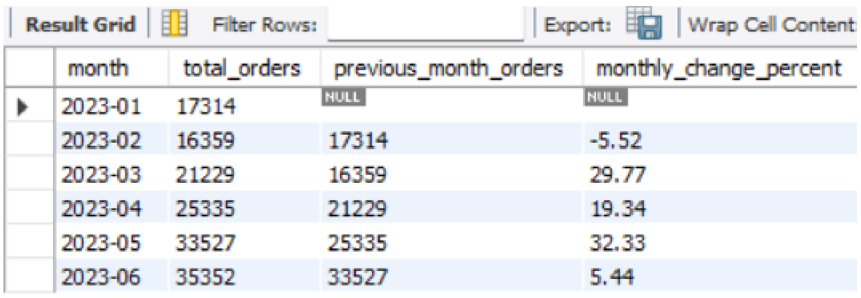
```
SELECT
    MONTH(transaction_date) AS month,
    COUNT(transaction_id) AS Total_Orders
FROM
    coffee_shop_sales
GROUP BY MONTH(transaction_date);
```



month	Total_Orders
1	17314
2	16359
3	21229
4	25335
5	33527
6	35352

TOTAL ORDERS KPI - MONTHLY DIFFERENCE AND MONTHLY GROWTH

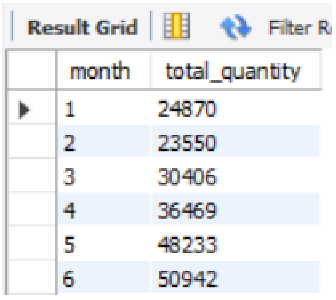
```
WITH monthly_orders AS (
    SELECT
        DATE_FORMAT(transaction_date, '%Y-%m') AS month,
        COUNT(*) AS total_orders
    FROM
        coffee_shop_sales
    GROUP BY
        DATE_FORMAT(transaction_date, '%Y-%m')
    ORDER BY
        month
)
SELECT
    month,
    total_orders,
    LAG(total_orders) OVER (ORDER BY month) AS previous_month_orders,
    CASE
        WHEN LAG(total_orders) OVER (ORDER BY month) IS NULL THEN NULL
        ELSE ROUND((total_orders - LAG(total_orders) OVER (ORDER BY month)) / CAST(LAG(total_orders) OVER
(ORDER BY month) AS DECIMAL) * 100, 2)
    END AS monthly_change_percent
FROM
    monthly_orders;
```



month	total_orders	previous_month_orders	monthly_change_percent
2023-01	17314	NULL	NULL
2023-02	16359	17314	-5.52
2023-03	21229	16359	29.77
2023-04	25335	21229	19.34
2023-05	33527	25335	32.33
2023-06	35352	33527	5.44

TOTAL QUANTITY SOLD

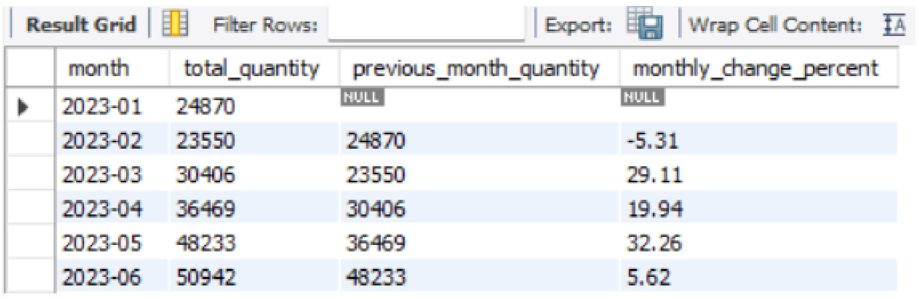
```
SELECT
    MONTH(transaction_date) AS month,
    sum(transaction_qty) AS total_quantity
FROM
    coffee_shop_sales
GROUP BY MONTH(transaction_date);
```



month	total_quantity
1	24870
2	23550
3	30406
4	36469
5	48233
6	50942

TOTAL QUANTITY SOLD KPI - MONTHLY DIFFERENCE AND MONTHLY GROWTH

```
WITH monthly_quantity AS (
  SELECT
    DATE_FORMAT(transaction_date, '%Y-%m') AS month,
    SUM(transaction_qty) AS total_quantity
  FROM
    coffee_shop_sales
  GROUP BY
    DATE_FORMAT(transaction_date, '%Y-%m')
  ORDER BY
    month
)
SELECT
  month,
  total_quantity,
  LAG(total_quantity) OVER(ORDER BY month) AS previous_month_quantity,
  CASE
    WHEN LAG(total_quantity) OVER(ORDER BY month) IS NOT NULL THEN
      ROUND((total_quantity - LAG(total_quantity) OVER(ORDER BY month)) / LAG(total_quantity)
OVER(ORDER BY month) * 100, 2)
    ELSE
      NULL
  END AS monthly_change_percent
FROM
  monthly_quantity;
```

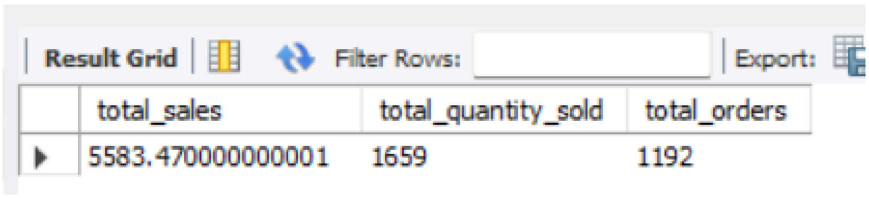


Result Grid | Filter Rows: | Export: | Wrap Cell Content:

month	total_quantity	previous_month_quantity	monthly_change_percent
2023-01	24870	NULL	NULL
2023-02	23550	24870	-5.31
2023-03	30406	23550	29.11
2023-04	36469	30406	19.94
2023-05	48233	36469	32.26
2023-06	50942	48233	5.62

CALENDAR TABLE – DAILY SALES, QUANTITY and TOTAL ORDERS

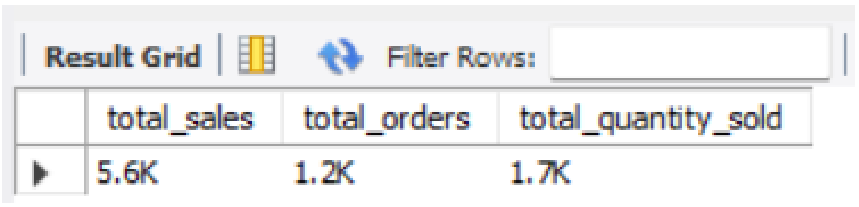
```
SELECT
    SUM(unit_price * transaction_qty) AS total_sales,
    SUM(transaction_qty) AS total_quantity_sold,
    COUNT(transaction_id) AS total_orders
FROM
    coffee_shop_sales
WHERE
    transaction_date = '2023-05-18'; --For 18 May 2023
```



total_sales	total_quantity_sold	total_orders
5583.470000000001	1659	1192

<u>If you want to get exact Rounded off values then use below query to get the result:</u>

```
SELECT
    CONCAT(ROUND(SUM(unit_price * transaction_qty) / 1000, 1),'K') AS total_sales,
    CONCAT(ROUND(COUNT(transaction_id) / 1000, 1),'K') AS total_orders,
    CONCAT(ROUND(SUM(transaction_qty) / 1000, 1),'K') AS total_quantity_sold
FROM
    coffee_shop_sales
WHERE
    transaction_date = '2023-05-18'; --For 18 May 2023
```

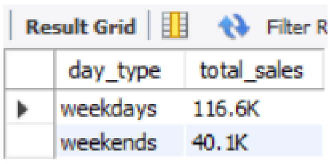


total_sales	total_orders	total_quantity_sold
5.6K	1.2K	1.7K

SALES BY WEEKDAYS AND WEEKENDS

```
SELECT
    CASE
        WHEN DAYOFWEEK(transaction_date) IN (1 , 7) THEN 'weekends'
        ELSE 'weekdays'
```

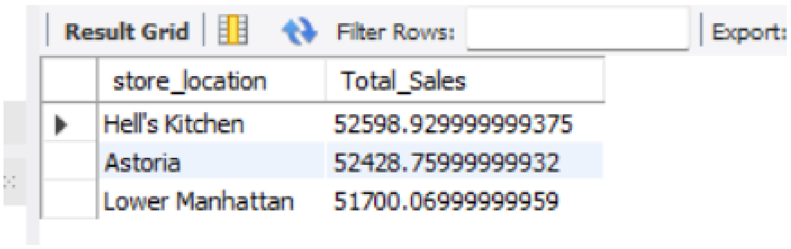
```
   END AS day_type,
   CONCAT(ROUND(SUM(transaction_qty * unit_price) / 1000,
            1),
       'K') AS total_sales
FROM
   coffee_shop_sales
WHERE
   MONTH(transaction_date) = 5  - -  MAY MONTH
GROUP BY CASE
   WHEN DAYOFWEEK(transaction_date) IN (1 , 7) THEN 'weekends'
   ELSE 'weekdays'
END;
```



day_type	total_sales
weekdays	116.6K
weekends	40.1K

SALES BY STORE LOCATION

```
SELECT
        store_location,
        SUM(unit_price * transaction_qty) as Total_Sales
FROM coffee_shop_sales
WHERE
        MONTH(transaction_date) =5
GROUP BY store_location
ORDER BY SUM(unit_price * transaction_qty) DESC
```

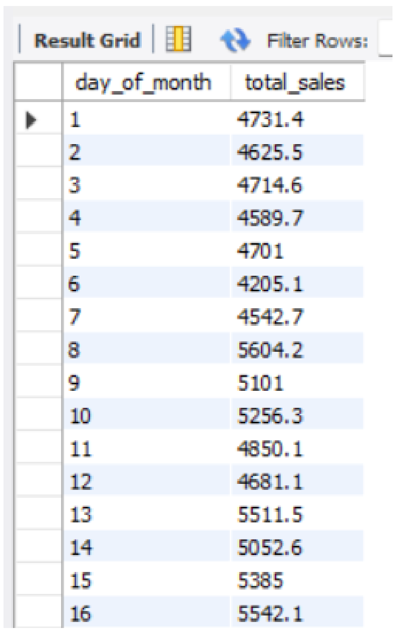


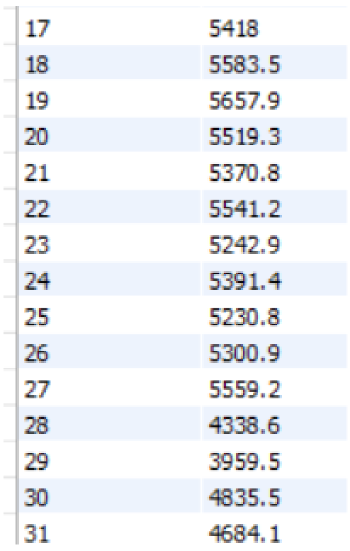
store_location	Total_Sales
Hell's Kitchen	52598.92999999375
Astoria	52428.75999999932
Lower Manhattan	51700.06999999959

DAILY SALES FOR MONTH SELECTED

```
SELECT
```

```
    DAY(transaction_date) AS day_of_month,
    ROUND(SUM(unit_price * transaction_qty),1) AS total_sales
FROM
    coffee_shop_sales
WHERE
    MONTH(transaction_date) = 5  -- Filter for May
GROUP BY
    DAY(transaction_date)
ORDER BY
    DAY(transaction_date);
```





day_of_month	total_sales
1	4731.4
2	4625.5
3	4714.6
4	4589.7
5	4701
6	4205.1
7	4542.7
8	5604.2
9	5101
10	5256.3
11	4850.1
12	4681.1
13	5511.5
14	5052.6
15	5385
16	5542.1
17	5418
18	5583.5
19	5657.9
20	5519.3
21	5370.8
22	5541.2
23	5242.9
24	5391.4
25	5230.8
26	5300.9
27	5559.2
28	4338.6
29	3959.5
30	4835.5
31	4684.1

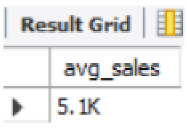
SALES TREND OVER PERIOD

```
SELECT
    CONCAT(ROUND(AVG(total_sales) / 1000, 1), 'K') AS avg_sales
FROM
    (SELECT
        SUM(transaction_qty * unit_price) AS total_sales
    FROM
        coffee_shop_sales
```

```
  WHERE
    MONTH(transaction_date) = 5
  GROUP BY transaction_date) AS internal_querry;
```

Query Explanation:

- This inner subquery calculates the total sales (unit_price * transaction_qty) for each date in May. It filters the data to include only transactions that occurred in May by using the MONTH() function to extract the month from the transaction_date column and filtering for May (month number 5).
- The GROUP BY clause groups the data by transaction_date, ensuring that the total sales are aggregated for each individual date in May.
- The outer query calculates the average of the total sales over all dates in May. It references the result of the inner subquery as a derived table named internal_query.
- The AVG() function calculates the average of the total_sales column from the derived table, giving us the average sales for May.

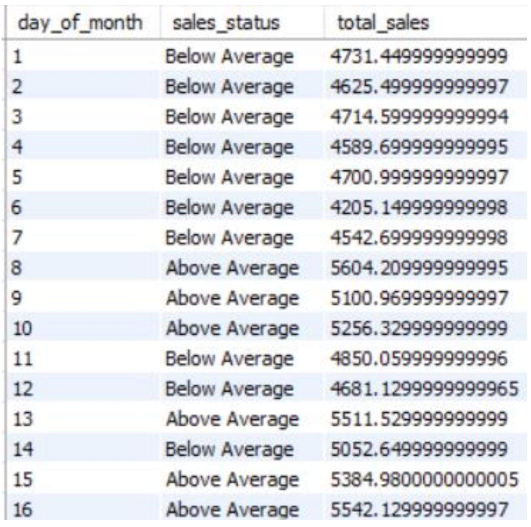
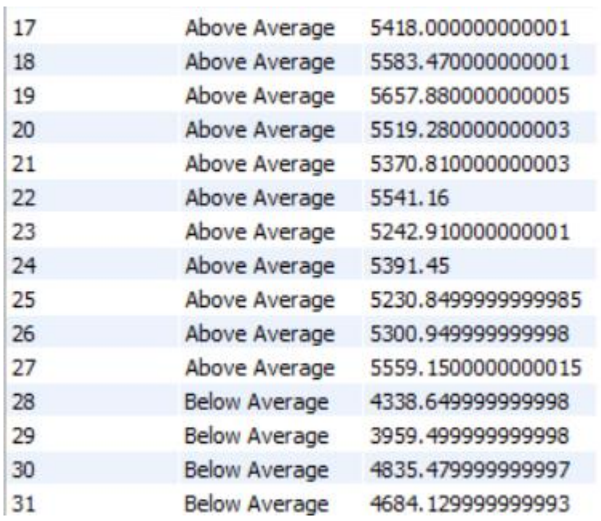


avg_sales
5.1K

COMPARING DAILY SALES WITH AVERAGE SALES – IF GREATER THAN "ABOVE AVERAGE" and LESSER THAN "BELOW AVERAGE"

```
SELECT
  day_of_month,
  CASE
    WHEN total_sales > avg_sales THEN 'Above Average'
    WHEN total_sales < avg_sales THEN 'Below Average'
    ELSE 'Average'
  END AS sales_status,
  total_sales
FROM (
  SELECT
    DAY(transaction_date) AS day_of_month,
    SUM(unit_price * transaction_qty) AS total_sales,
    AVG(SUM(unit_price * transaction_qty)) OVER () AS avg_sales
  FROM
```

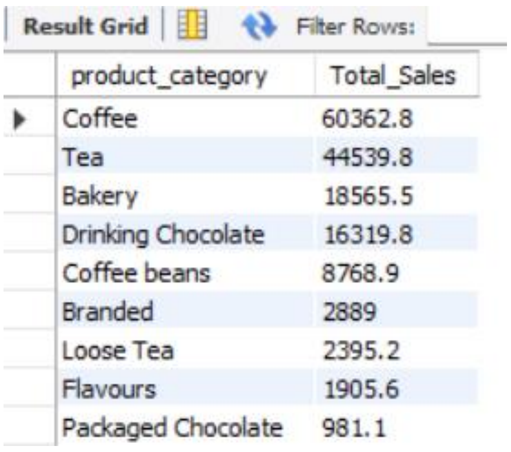
```
        coffee_shop_sales
    WHERE
        MONTH(transaction_date) = 5  -- Filter for May
    GROUP BY
        DAY(transaction_date)
) AS sales_data
ORDER BY
    day_of_month;
```

day_of_month	sales_status	total_sales
1	Below Average	4731.449999999999
2	Below Average	4625.499999999997
3	Below Average	4714.599999999994
4	Below Average	4589.699999999995
5	Below Average	4700.999999999997
6	Below Average	4205.149999999998
7	Below Average	4542.699999999998
8	Above Average	5604.209999999995
9	Above Average	5100.969999999997
10	Above Average	5256.329999999999
11	Below Average	4850.059999999996
12	Below Average	4681.1299999999965
13	Above Average	5511.529999999999
14	Below Average	5052.649999999999
15	Above Average	5384.9800000000005
16	Above Average	5542.129999999997
17	Above Average	5418.000000000001
18	Above Average	5583.470000000001
19	Above Average	5657.880000000005
20	Above Average	5519.280000000003
21	Above Average	5370.810000000003
22	Above Average	5541.16
23	Above Average	5242.910000000001
24	Above Average	5391.45
25	Above Average	5230.8499999999985
26	Above Average	5300.949999999998
27	Above Average	5559.1500000000015
28	Below Average	4338.649999999998
29	Below Average	3959.499999999998
30	Below Average	4835.479999999997
31	Below Average	4684.129999999993

SALES BY PRODUCT CATEGORY

```
SELECT
        product_category,
        ROUND(SUM(unit_price * transaction_qty),1) as Total_Sales
FROM coffee_shop_sales
WHERE
        MONTH(transaction_date) = 5
GROUP BY product_category
ORDER BY SUM(unit_price * transaction_qty) DESC
```

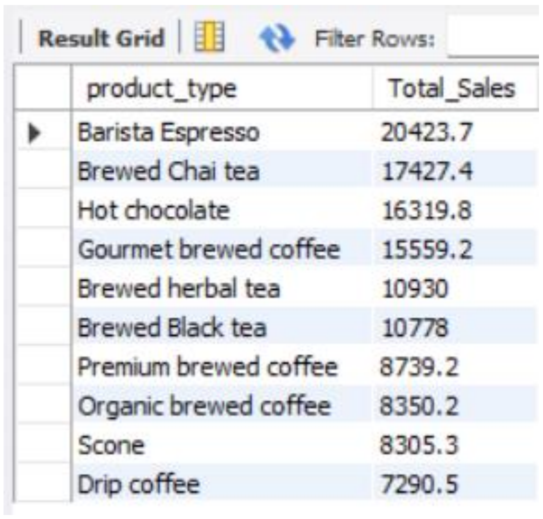


Result Grid | Filter Rows:

product_category	Total_Sales
Coffee	60362.8
Tea	44539.8
Bakery	18565.5
Drinking Chocolate	16319.8
Coffee beans	8768.9
Branded	2889
Loose Tea	2395.2
Flavours	1905.6
Packaged Chocolate	981.1

SALES BY PRODUCTS (TOP 10)

```
SELECT
        product_type,
        ROUND(SUM(unit_price * transaction_qty),1) as Total_Sales
FROM coffee_shop_sales
WHERE
        MONTH(transaction_date) = 5
GROUP BY product_type
ORDER BY SUM(unit_price * transaction_qty) DESC
LIMIT 10
```

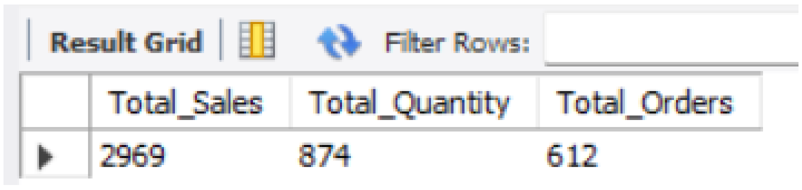


Result Grid | Filter Rows:

product_type	Total_Sales
Barista Espresso	20423.7
Brewed Chai tea	17427.4
Hot chocolate	16319.8
Gourmet brewed coffee	15559.2
Brewed herbal tea	10930
Brewed Black tea	10778
Premium brewed coffee	8739.2
Organic brewed coffee	8350.2
Scone	8305.3
Drip coffee	7290.5

SALES BY DAY | HOUR

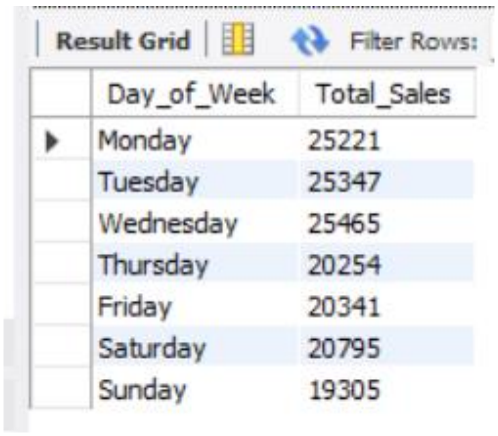
```
SELECT
    ROUND(SUM(unit_price * transaction_qty)) AS Total_Sales,
    SUM(transaction_qty) AS Total_Quantity,
    COUNT(*) AS Total_Orders
FROM
    coffee_shop_sales
WHERE
    DAYOFWEEK(transaction_date) = 3 -- Filter for Tuesday (1 is Sunday, 2 is Monday, ..., 7 is Saturday)
    AND HOUR(transaction_time) = 8 -- Filter for hour number 8
    AND MONTH(transaction_date) = 5; -- Filter for May (month number 5)
```



Total_Sales	Total_Quantity	Total_Orders
2969	874	612

TO GET SALES FROM MONDAY TO SUNDAY FOR MONTH OF MAY

```
SELECT
    CASE
        WHEN DAYOFWEEK(transaction_date) = 2 THEN 'Monday'
        WHEN DAYOFWEEK(transaction_date) = 3 THEN 'Tuesday'
        WHEN DAYOFWEEK(transaction_date) = 4 THEN 'Wednesday'
        WHEN DAYOFWEEK(transaction_date) = 5 THEN 'Thursday'
        WHEN DAYOFWEEK(transaction_date) = 6 THEN 'Friday'
        WHEN DAYOFWEEK(transaction_date) = 7 THEN 'Saturday'

        ELSE 'Sunday'

    END AS Day_of_Week,

    ROUND(SUM(unit_price * transaction_qty)) AS Total_Sales

FROM

    coffee_shop_sales

WHERE

    MONTH(transaction_date) = 5 -- Filter for May (month number 5)

GROUP BY

    CASE

        WHEN DAYOFWEEK(transaction_date) = 2 THEN 'Monday'

        WHEN DAYOFWEEK(transaction_date) = 3 THEN 'Tuesday'

        WHEN DAYOFWEEK(transaction_date) = 4 THEN 'Wednesday'

        WHEN DAYOFWEEK(transaction_date) = 5 THEN 'Thursday'

        WHEN DAYOFWEEK(transaction_date) = 6 THEN 'Friday'

        WHEN DAYOFWEEK(transaction_date) = 7 THEN 'Saturday'

        ELSE 'Sunday'

    END;
```

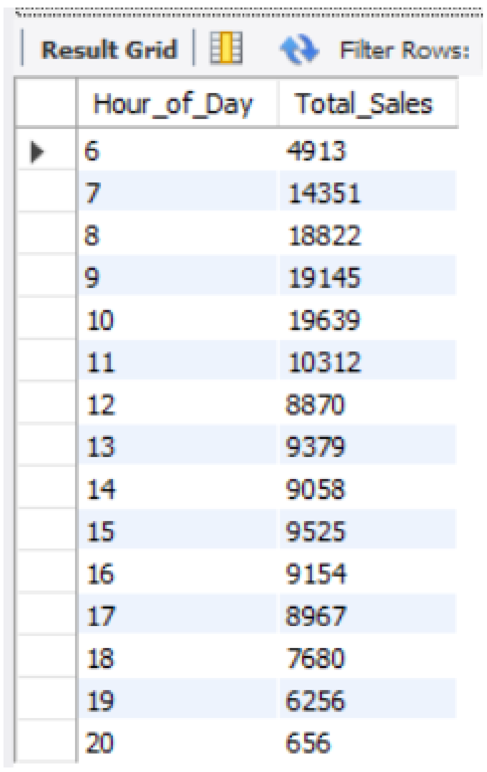


Day_of_Week	Total_Sales
Monday	25221
Tuesday	25347
Wednesday	25465
Thursday	20254
Friday	20341
Saturday	20795
Sunday	19305

TO GET SALES FOR ALL HOURS FOR MONTH OF MAY

```
SELECT

    HOUR(transaction_time) AS Hour_of_Day,

    ROUND(SUM(unit_price * transaction_qty)) AS Total_Sales

FROM
```

```
    coffee_shop_sales
WHERE
    MONTH(transaction_date) = 5 -- Filter for May (month number 5)
GROUP BY
    HOUR(transaction_time)
ORDER BY
    HOUR(transaction_time);
```



Hour_of_Day	Total_Sales
6	4913
7	14351
8	18822
9	19145
10	19639
11	10312
12	8870
13	9379
14	9058
15	9525
16	9154
17	8967
18	7680
19	6256
20	656